

CLAIMS:

1. A method of reducing a number of texture samples used for anisotropic texture map filtering, comprising:
  - receiving a logratio value;
  - modifying the logratio value to produce a first-modified logratio value; and
  - determining a first number of texture samples to filter based on the first-modified logratio value.
2. The method of claim 1, wherein the first number of texture samples are read from a texture map corresponding to LODfine.
3. The method of claim 1, wherein the step of modifying the logratio value to produce the first-modified logratio value includes applying a bias to the logratio value.
4. The method of claim 3, wherein the bias is determined by a knob value.
5. The method of claim 1, wherein the step of modifying the logratio value to produce the first-modified logratio value is based on LODfrac.
6. The method of claim 1, further comprising:
  - modifying the logratio value to produce a second-modified logratio value;
  - and
  - determining a second number of texture samples to filter based on the second-modified logratio value.
7. The method of claim 6, wherein the second number of texture samples are read from a texture map corresponding to LODcoarse.
8. The method of claim 6, wherein the step of modifying the logratio value to produce a second-modified logratio value is based on LODfrac.

9. A method of shortening a footprint of a pixel in texture space, comprising:  
    receiving a major axis length for the footprint;  
    receiving a minor axis length for the footprint;  
    computing a logratio value using the major axis length and the minor axis length; and  
    modifying the logratio value based on a programmable value of a knob to produce a modified logratio corresponding to a shortened footprint.
10. The method of claim 9, wherein the programmable value of the knob is used to reduce a first number of texture samples read from a texture map corresponding to LODfine.
11. The method of claim 9, wherein the programmable value of the knob is used to reduce a second number of texture samples read from a texture map corresponding to LODcoarse.
12. The method of claim 9, wherein the step of modifying includes combining the programmable value of the knob with a LODfrac to modify the logratio value.
13. The method of claim 9, wherein the step of modifying includes determining a bias that is applied to the logratio value based on the programmable value of the knob.
14. The method of claim 9, further comprising a step of determining a first number of texture samples to read from a texture map based on the modified logratio.
15. An anisotropic unit for determining a number of texture samples to anisotropically filter, comprising:

a logratio computation unit configured to obtain a major axis length and a minor axis length and produce a logratio value; and

a logratio modification unit configured to receive the logratio value and modify the logratio value to produce a first-modified logratio value.

16. The anisotropic unit of claim 15, wherein the logratio modification unit stores at least one programmable knob value used to modify the logratio value.

17. The anisotropic unit of claim 15, wherein the logratio modification unit is configured to produce a second-modified logratio value responsive to the at least one programmable knob value.

18. The anisotropic unit of claim 16, further comprising a sample location unit configured to determine a first number of texture samples based on the first-modified logratio value and a second number of texture samples based on the second-modified logratio value.

19. The anisotropic unit of claim 15, further comprising a texture filter unit configured to receive the first number of texture samples and the second number of texture samples and produce a filtered texture sample.

20. The anisotropic unit of claim 15, wherein the anisotropic unit is included within a programmable graphics processor, the programmable graphics processor including:

a rasterizer configured to processes primitives and generates fragment data including parameters;

a texture unit including the anisotropic unit, the texture unit configured to receive the parameters from the rasterizer.